A CASE STUDY OF JOB ANALYSIS AND ITS POSITIVE IMPACT ON BEHAVIORAL STRUCTURED INTERVIEW

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Abstract

Following a Functional Job Analysis methodology in which job duties and job specifications were initially identified, key Knowledge, Skills, Abilities and Other Attributes (KSAO's) were extracted from critical statements using task statements and task inventory for a Canadian National Occupational job classification requisite position. The KSAO's were further differentiated on the basis of Tasks, Context and Counter-productive behavioral components. A Performance Appraisal tool was developed based on an Absolute Rating System using Graphical Rating Scalesaligned to the Knowledge, Skills, Abilities and Other Attributes derived from job analysis.For testing and screening of candidates, a Behavioral Description Interview tool was developed based on the behavioral structured interview tool developed on the basis of the job analysis. This was a Structured Interviewthat consisted of a standardized set of job-related questions based on KSAO's identified, complete with Probes and a scoring guide. This case study research studies the alignment between Job Analysis conducted and the KSAO's derived used on a PM tool that are aligned with the Behavioral Interview Questionnaire developed for a Customer Care position for a multinational company.

Key terms: Functional Job Analysis, Knowledge, Skills, Abilities, Other Attributes, Behavioral Interview, Structured Questionnaire, Scoring Guide, Probes

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1. Introduction

Standardization of interview questions leads to greater validity of the outcome and, a job and organization fit can be ensured for a position leading to valid and reliable hiring decisions. Selection-rated litigation will be reduced because of standardization of questions based on job analysis. The organization will be insulated from discrimination lawsuits due to this. Finally, using a standardized, job-criteria based scoring guide is legally defensible.

Canadian and US guideline on Employee Selection stipulate that job analysis is a crucial step in validating all personnel activities. The research conducted within a multinational organization in Canada demonstrates positive impact of key outcomes of a Job Analysis on the Selection Interview tool developed as a result of the Knowledge, Skill, Abilities and Other Attributes (KSAO's) derived and right task, contextual and counter-productive behaviors required for a job that are critical to the performance of a job. Similar processes can be replicated in any other organization around the world. The aim of the research is a perfect organization and job fit for a 'requisite' position within a private multinational organization by evaluating key KSAO's and testing job appropriate behaviors and competencies required for a job using a structured behavioral interview tool.

A Person-Organization Fit was carried outby Cantano et al., (2010, pp.1-19) to assess potential employees in terms of their fit with both the job and the organization A Person-Job Fitascertained ensures the case when a job candidate has the Knowledge, Skills, Abilities, or Competencies required by the position in question evaluated through a *jobanalysis*. "*Employers are successful if they demonstrate evidence of criterion-related and content-related validity for these requirementsachieved by conducting job analyses that can demonstrate these factors – example: the nature of the job, any advanced knowledge required for the job, or "performance that is linked to education requirements (criterion-related validity).*"(Cantano, Wiesner, Heckett, Methot, &Belcourt, 2010, p.30).

The research conducted is based on an accurate, detailed, thorough and thoughtful job analysis and the rest of the projects flow from it as follows:

1.1 The job position is based on a National Classification Code:

The 'requisite' position chosen in the multinational company was of a Customer Care Representative and the job description (JD) taken was a standardized JD based on Canadian National Occupation Code (NOC) for job classification id 6553.

1.2 Job Analysis is based on the Functional Job Analysis technique:

Functional Job Analysis (FJA) was usedas it is more structured, reliable, thorough and a more rigorous method. "Validation of FJA task data based on social-organizational validation strategies" (Cronshaw, Best, Zugec, Warner, Hysong& Pugh, 2007, pp.12), helps in deriving Task Statements and creating a Task Inventory and rating Task Statements against the KSAO's and job related criteria. FJA also helps in determining "what tests can be administered to select or prompt"(Cronshow et al., 2007, pp.12) enabling the employer to effectively recruit and screen applicants based on the KSAO's identified.

1.3 Behavioral Description Tool developed along with Probes and Scoring guide as a valid and reliable predictor tool:

The FJA forms the basis for *Behavioral Description Interview* (BDI). Behavioral questions were based on information obtained from the incumbent through interview and questions used with other job incumbents while rating the task statements. These have also been based on the *behavioral structured interview tool* developed on the basis of the *job analysis*. Questions and scoring guides developed were first tested on a select group of applicants to ensure questions were clear and could generate a wide range of responses. *Probes*/follow-up questions were developed for the interviewer to guide the applicant. Necessary training was given to interviewers on scoring of answers that did not fit with examples in the scoring guide. The *Scoring Guide*useda behavior rating scale of 1, 3 and 5 with sample answers to each question to help interviewers evaluate and score candidate answers, with 1 being low and 5 being high. These have been based on KSAO's and performance management criteria derived from *job analysis*.

1.4 Why a Structured Interview?

A structured interview will be used for the following benefits:

- It helps in standardization of interview questions, which leads to greater validity of the outcome
- Due to standardization, interviewees' can be compared by the panel on the same basis and can compare merits of each applicant relative to the other
- Standardization will increase inter-rater reliability and validity
- It is a fair process

- Selection-rated litigation will be reduced because of standardization of questions based on job analysis
- The organization will be insulated from discrimination lawsuits due to this
- Finally, using a standardized, job-criteria based scoring guide is legally defensible.

1.5 Scope and Limitations

The studiedJob Analysis has a scope to help today's Managers in various ways:

- In developing an aligned behavioral description interview questionnaire that ensures that only candidates with job required KSAO's are selected, which is the area of research covered in this paper.
- In conducting a standardized structured interview based on the KSAO's derived from Job Analysis.
- In developingJob Descriptions and Job Specifications. "The interviews show that job descriptions are considered important in the company'. (Bodnarchuk, 2012, pp.41)
- In screening application forms for the minimum qualification (MQ's), which are the required KSAO's for successful performance on the job.
- In developing a behavioral structured interview tool aligned to the required KSAO's on the job. 'Job performance factors help design appraisal tools'. (Nankervis, Compton and Baird, 2002, pp. 1-736)
- In testing to finalize job candidates who have the required KSAO's to successfully perform at the job.
- Finally, in decision-making where hiring decisions will be based on valid and reliable measurement of various KSAO's tested and derived using job analysis.

Thecase study approach of the research on job analysis can be seen as a limitation as it was conductedwithin one organization's multinational environment.

1.6   Significance of the Study

The Behavioral Interview tool developed is based on probes and scoring guides, which is based on an Absolute Rating Performance system, as it is more valid and reliable as it compares employee performance with an absolute standard of performance. Job analysis is 'key to

recruitment, selection, orientation, training, career development, counseling, health, safety, performance management and compensation' processes. Data gathered and analyzed through job analysis helps in designing job descriptions and jobspecification and is used in a variety of other HR related functions including preparing job classification, job evaluations, selection and recruitment, performance appraisal and training including incentive pay and compensation, improving work conditions, charting lines of responsibilities etc.

1.7 Operational Definition of Terms in the Study

For better understanding of the terms used in this research, the followings are their operational and conceptual definitions;

Structured Interview: Standardized Job Analysis Interview Questionnaire used to understand important tasks, knowledge, skills, abilities required, physical abilities, environmental conditions, typical working incidents, supervisory responsibilities, etc., and to objectively describe the critical components of the job.

Knowledge: A body of information that is distributive and procedural in nature, needed for the successful performance of a requisite job.

Skills: Level of competency or proficiency/atomicity as expressed in numerical terms for specific tasks.

Ability: A more general capability needed by employees at the beginning of tasks that includes their values and attitudes.

Other Attributes: Personality traits or other personal traits integral to performance of the job.

Task Statements:Incorporate 4 elements – a verb describing the action; an object of the verb; a description of tools, equipment, aids and processes used on the job; and the expected job output.

Task Inventory:Tabulation of all task statements in which, at least 75% employees are engaged.

2.   Review of Related Literature and Studies

"JA plays a vital role in Human Resource Management and is a prerequisite for other core functions of HRMsuch as Selection, Training and Development, Compensation and Performance Management" (Zubair et al., 2014, pp.51). Olson, Fine, Myers, and Jennings (1981, pp.351-364) expressed view in their research completed earlier for a large international craft union provided the opportunity for an empirical assessment of functional jobanalysis (FJA) as a method for developing job-related performance standards. "One of the central themes in the

fields of Organizational Psychology is mapping the relationship between individual characteristics (e.g., skills, abilities, personality traits) and workplace behavior" (Gruys and Sackett, 2003, pp.30-43).

"*Job analysis information is used in a variety of personnel functions (e.g., writing job descriptions, designing performance appraisal and selection tools, assessing training needs, classifying jobs, and administer in compensation systems).*" (Friedman and Harvey, 1986, p.779). Job analysis is thus key to Recruitment, Selection, Orientation, Training, Career Development, Counseling, Health, Safety, Performance Management and Compensation.

Bodnarchu(2012, pp.2,6-8,13,16,26-28,30,35-36,38,43,50,62,66) and Singh (2009, para.1.0-1.2, 2.0) have highlighted the importance of JA in the changing work place environment."Job Analysis also gives managers a legally defensible tool against pleas of discrimination against protected groups, when hiring and selection decisions including performance appraisal and other HR decisions" (Kshatriya, 2016, p.205).Bodnarchuk (2012, p.1-70) concluded that through job analysis two important documents i.e. Job Description and Job Specification are developed (which set the bases for Performance Management.

"Job analysis is a fundamental organizational practice all over the world." (Brannick and Levine, 2007, p.709). Job analysis is "the systematic process of discovery of the nature of a job by dividing it into smaller units."(Morgeson and Campion, 2007, pp.8). Competency with regards to job analysis is a list of tasks, duties, responsibilities, knowledge, skills, and abilities that a person must have in order to be sufficiently competent at a given position. Clifford (1994, pp.321-340) concluded that an effective growth program for an organization couldn't be formed without performing a job analysis.

It was concluded, "Recruitment is done to meet Management goals and objectives for the organization and must also meet current legal requirements - human rights, employment equity, labour law and other legislation" (Catano et al., 2010, p.236). "A sustainable competitive advantage is achieved through people, starting with recruiting the best" (Catano et al., 2010, p.249).

"*Job Analysis gives managers a legally defensible tool against pleas of discrimination against protected groups, when hiring and selection decisions are made including performance appraisal and other HR decision related to pay increases, promotion, training etc., are based on job analysis*" (Kshatriya, 2016, pp.205). Another study showed how Organizational Behavior Management research and practice could incorporate tools from Job Analysis to achieve "an

effective and socially valid organizational improvement strategy" (Crowell, Hantula and McArthur, 2011, pp. 316-332).Yet, other studies discussed that "the backbone of most human resource activities is jobanalysis"(Byars and Rue, 2006, pp. 83-114) which can serve a number of functions.

"*Job analysis answers the questions of what tasks, performed in what manner, make up a job. Outputs of this analytical study include: (a) a list of the job tasks; (b) details of how each task is performed; (c) statements describing the responsibility, job knowledge, mental application, and dexterity, as well as accuracy required; and (d) a list of the equipment, materials, and supplies used to perform the job.*" (Clifton, 1989, p.187). Job analysis is a systematic procedure by which one describes the way a job is performed, the tasks that constitute a job, and/or the skills and abilities necessary to perform a job.

However, "Job Analysis is done under the light of the overall organizational strategy which itself is derived from overall organizational objectives and goals"(Zubairet al., 2014, p.53). "Outputs of this analytical study include: (a) a list of the job tasks; (b) details of how each task is performed; (c) statements describing the responsibility, job knowledge, mental application, and dexterity, as well as accuracy required; and (d) a list of the equipment, materials, and supplies used to perform the job"(Clifton, 1989, p.187).A study by Siddique (2004, p.219) examined the impact of jobanalysis on organizational performance among 148 companies based in the United Arab Emirates (UAE). Survey results of that study indicated that a practice of proactive jobanalysis was strongly related to organizational performance. "A sustainable competitive advantage is achieved through people, starting with recruiting the best". (Cantano et al., 2010, p. 249). Organization an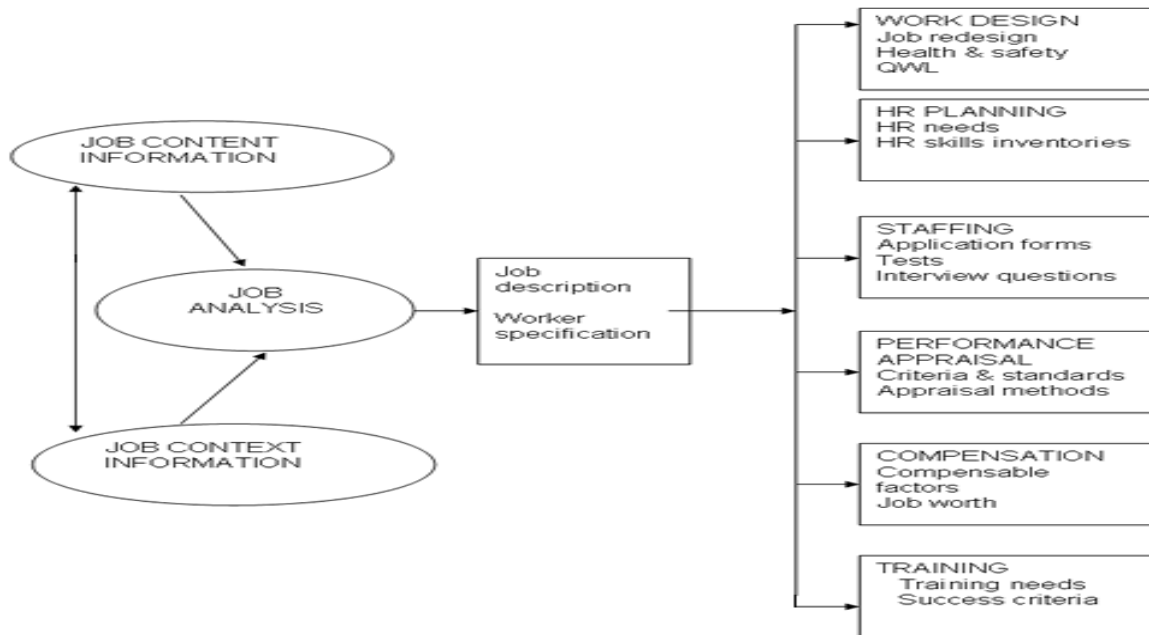d job analysis will help identify human resources required to implement the business plan, both through internal resources and KSAO's obtained through recruitment.

2.1 Theoretical Framework of the Study

Centrality of Job Analysis
Source: Adapted from J. Ghorpade (1989, p.6). Job analysis: A handbook for the HR director. Englewood cliffs, NJ: Prentice Hall

2.2. Conceptual Framework of the Study

"Functional Job Analysis is:

- *a conceptual system which defines dimensions of work activity, eg, data, people and things and domains of human performance, ie, cognitive, affective, and psychomotor, and interrelates the two;*

- *an observational method and thus a way of looking at and recording people at work; and*

- *a method of analysis which relates all work output to the goals and objectives of the work organization and to the skills, knowledge and attitudes of the workers*". (Olson et al., 1981, p. 351-364)

2.3 Research Synthesis

From an initial list of 37 KSAO's arrived at prior to the completion of the 'Task Statement and KSAO Matrix' evaluation, 15 significant KSAO's were derived after the matrix evaluation was completed that were further identified on the basis of tasks, context and counterproductive attributes. These final 15KSAO's were then used to develop a Performance Appraisal Tool for the requisite position of a Customer Care Representative using Graphical

Rating Scales as a valid and reliable predictor based on the critical criteria of the final KSAO's derived through job analysis, to evaluate performance based on demonstration of these task, contextual and counter-productive behaviors.

The process involved initial identification of critical statements and analyses of task statements; compilation of a task inventory and getting that task inventory rated by multiple incumbents and SME's to arrive at a final list of task statements, which were based on 75% agreeability of all incumbents performing the job. This was done after the mean of the frequency, importance and difficulty of each task statement was rated by incumbents in the sample. Only 11 task statements were finally considered from initial 14 that had a mean of 3 and above on a 5-point scale. Key KSAO's were identified and analyzed based on their importance and proficiency. Finally, a task statement and KSAO matrix was drawn and evaluated for the number of positive indicators. Those components that received percentage weighting/ rankings and those which had a 50% and higher occurrence of each knowledge, skill, ability and other attribute within each task statement wasranked for significance.

Thus, of the total 37 KSAO components derived from the initial 14 task statements, only 15 final important KSAO's received a final percentage of weightage. These final 15 KSAO's were used as performance dimensions in the Behavioral Description Interview tool. This was done by evaluating 11 Task Statements using the KSAO Matrixes and by focusing on the KSAO's that met most tasks (derived by taking KSAO's averaging at 50% and above) in the matrix. Finally, these 15 KSAO's were given ranking. These final, weighted 15 significant KSAO's form the basis on which several other HR tool were developed such as a Job Description, Job Specification, Behavioral Description Interview Questionnaire, Standard Structured Performance Evaluation etc., using KSAO's that have been arrived using the rigorous method of job analysis.

3.   Methodology

3.1   Research Design

Initially a functional job analysis was carried out for a requisite position based on National Classification Code of Canada, wherein a Standardized Job Analysis Interview Questionnaire was developed and implemented to assess important tasks, knowledge, skills, abilities required, physical abilities, environmental conditions, typical working incidents, supervisory

responsibilities, etc., for a sample of 9 customer service representatives and 3 Groups' subject matter area experts taken from within the multinational company. KSAO's were derived based on a detailed interview conducted.

Task statements were created based on the identification of critical statements leading to the formation of a task inventory incorporating the following 4 elements – a verb describing the action; an object of the verb; a description of tools, equipment, aids and processes used on the job; and the expected job output, rated these tasks in order of its Frequency, Importance and Difficulty an a 5-point scale of 1-5.

Questions asked included knowledge of subject matter area covered by each task / major duties; environmental conditions of the job; assessing the worker-function orientation with regards to the facts and principles needed on the job; the worker instruction regarding the level, degree and breadth of knowledge required for the area; duration of each major task in terms of duration and periodicity; general education and reasoning, math and language abilities. Based on the evaluation of answers received from each of the samples, final task statements were derived to indicate tasks where at least 75% employees engaged in them. This task inventory was identified in terms of frequency, Importance and Difficulty on a 5-point scale of 1-5. Creating a short-list of 14 task statements prior to the 75% rating done.

Then, 37 KSAO's were derived out of 14 task statements as a result of the analysis of the final task statementsthat included uncovering 11 knowledge areas, 9 skill areas, 12 ability areas and 5 other attribute components. However, in the final task inventory only final 11 task statements were taken, those with a mean of 3 and upwards on a 5-point scale. Each KSAO was then rated in order of importance on a 5-point scale of 1-5 and in order of proficiency on a 3-point scale of 1-3.

3.2   Sample and Sampling design

The Customer Care job position is based on the National Classification Code of Canada and a sample of 9 customer service representatives and 3 Groups' subject matter area experts were taken from a multinational Canadian company following a simple random sampling. These were chosen form 3 different branches involved in retail and from contact centers. As per NOC code 6552, "Customer service representatives in retail establishments answer in person or on the phone, enquiries from customers and investigate complaints regarding the establishment's goods, services and policies; arrange for refunds, exchange and credit for

returned merchandise; receive account payments; and receive credit and employment applications. Employment requirements of the job position include completion of secondary school; completion of some college or other post-secondary programs may be required, clerical or sales experience and a valid driving license".

3.2.1 Research Instruments and Techniques

The following research instruments were used: Standardized Job Analysis Interview Questionnaire, National Classification Code, Task Statement Bank Sheet and Task Inventory.

Table 1: Final Task Inventory

		Final Task Statements'	Aver. Mean	Freq. Mean	Imp. Mean	Diff. Mean
T	1	Research about company on the internet to gather customer information	3	3.00	2.67	2.67
T	2	Contact customers to find out their potential for sales	3	1.67	2.67	3.33
T	3	Use a product list to inform customers about new product lines	3	3.33	2.67	2.00
T	4	Use IMS database to gather, update and record customer information	4	3.33	5.00	2.33
T	5	Prepare customized letters /packages for each interested customer	3	3.33	4.33	2.67
T	6	Disable uninterested customers from the database	3	3.33	4.00	2.00
T	7	Evaluate sales generated each month from the customer list	3	2.00	4.67	2.67
T	8	Report monthly to Manager on financial and performance outcomes	3	3.00	4.67	2.33
T	9	Record statistics pertaining to the customers as a result of action taken	3	3.33	4.67	2.33
T	10	Send emails to Customers and Managers to update on positive responses	4	5.00	4.67	2.00
T	11	Use laptop/computer to carry out the work of regenerating old customers	4	5.00	5.00	3.00

Technique used to arrive at the final KSAO's was an initial creation a Task Inventory shown in Table 1 on the scale of Frequency, Importance and Difficulty, for calculating the mean. This was followed by evaluation of KSAO's needed for each task

statement as shown under section 3.2.2. These KSAO's were further evaluated on a scale of importance and proficiency as shown in tables 2 to 5. Task * KSAO Matriceswere created to understand the number of KSAO components occurring in each task, as shown in tables 6 to 9. Task Characterization was done using these matrices and only those KSAO's were finally regarded as being important for the completion of each task – those that present at least 50% of the times and more. These final KSAO's were listed in order of their percentage weighting / ranking and became job performance dimensions or behaviors used in the behavioral structured interview tool to evaluated evidence of a person-job fit.

3.2.2   The Job Analysis KSAO's developed:

Que.1) Based on job analysis, what is the nature of the position that must be filled?

Ans.1) This position requires someone with the following Knowledge, Skills, Abilities and

Other Attributes, based on the Job Analysis conducted:

Knowledge:

1.   Knowledge of English Language
2.   Knowledge of Computers

Skills:

3.   Skill in Written Communication
4.   Skill in using Microsoft Word, Excel and Outlook
5.   Skill in Verbal Communication

Abilities:

6.   Ability to make Judgment
7.   Ability to work Concurrently
8.   Ability for Self-Management
9.   Ability to Multitask
10. Ability to work in a cramped Environment and Space
11. Ability to Make Decisions
12. Interpersonal Ability
13. Ability to deal with new People and Situations

Other Attributes:

14. Attribute of Emotional Intelligence
15. Attribute of Honesty

3.2.3   Behavioral structured interview tool developedwith its link to KSAO's:

An interview tool was used for conducting *selection interview* after *reviewing of job applicants.* Here is a summary of how a structured interview tool was developed conducted. The *Structured Interview*consisted of a standardized set of job-related questions including a scoring guide. The following was considered while designing the interview structure:

- The interview questions were derived from *job analysis* conducted earlier
- These interview questions were standardized and all applicants to be asked the same questions
- Probing on questions to be allowed; however there will be limits to the probes provided in the scoring guide
- The structured interview questions will focus on behaviors rather than on candidate self-evaluations
- A panel of 3 mixed race board of interviewers must be used
- All answers to be rated separately while the interview is ongoing
- Rating scales to be provided in the scoring guide along with behavioral examples to be used by the interviewers to rate all candidates
- To calculate total score for each candidate by adding scores for all questions
- Notes to be taken by all 3 panel members during the course of the interview
- The same panel will interview all candidates for greater standardization

4. Findings of the Study

4.1   Initial 37 KSAO's were derived from the task statements:

The following scales were used:

- *Scale of Importance*:   0-None;   1-Little;   2-Some;   3-Moderate;   4-Very;   5-Extremely
- *Scale of Proficiency*:   0-Not needed; 1-Needed upon entry to job; 2-Can be learnt through training; 3-Needed at end of training

Table 2: Final Knowledge Components

		Knowledge:	Importance	Proficiency
K	1	Knowledge of Database Management	5	2
K	2	Knowledge of Research	3	2
K	3	Knowledge of English Language	5	1
K	4	Knowledge of Computers	4	1
K	5	Knowledge of Cold Calling	5	2
K	6	Knowledge of Creative Writing	3	2
K	7	Knowledge of Products	2	2
K	8	Knowledge of Using Computer Hardware	2	2
K	9	Knowledge of Branch Locations	4	2
K	10	Knowledge of Advanced Computer Skills (Excel, Graphs, Charts)	5	2
K	11	Knowledge of Math / Statistics (Statistical Averages, Means)	5	2

As presented in Table 2, the Knowledge components were determined in terms of the importance and proficiency scales as assigned.

Table 3: Final Skill Components

		Skills:	Importance	Proficiency
S	1	Skill in Operating IMS Database	5	2
S	2	Skill in Internet Browsing	3	1
S	3	Skill in Written Communication	3	1
S	4	Skill in Verbal Communication	4	1
S	5	Skill in using Microsoft Word, Excel and Outlook	4	1
S	6	Skill in Writing Letters	3	2
S	7	Skill in making Promotional Packages	5	2
S	8	Skill in making Charts and Graphs	4	2
S	9	Skill in Mathematical Calculations	4	2

As presented in Table 3, the Skill components were determined in terms of the importance and proficiency scales as assigned.

Table 4: Final Ability Components

		Abilities:	Importance	Proficiency
A	1	Ability to Understand and Follow Verbal and Written Instructions	5	1
A	2	Ability to make Judgment	5	1
A	3	Ability to Work Concurrently	4	1
A	4	Interpersonal Ability	5	1
A	5	Ability to Self-Manage	5	1
A	6	Ability to do Simple Mathematical Calculations	3	1
A	7	Ability to Problem Solve	4	2
A	8	Ability to Multitask	4	1
A	9	Ability to work in a cramped Environment and Space sometimes	3	1
A	10	Ability to lift 15 kg weight	2	2
A	11	Ability to deal with New People and Situations	5	1
A	12	Ability to Make Decision	5	1

As presented in Table 4, the Knowledge components were determined in terms of the importance and proficiency scales as assigned.

Table 5: Final Other Attribute Components

		Other Attributes:	Importance	Proficiency
O	1	Emotional Intelligence	5	1
O	2	Mental Endurance	3	1
O	3	Resilience	4	1
O	4	Honesty	4	1
O	5	Empathy	5	1

As presented in Table 5, the Other Attributes were determined in terms of the importance and proficiency scales as assigned.

4.2 Final KSAO's were derived using the Task statements by KSAO matrix evaluation tool

The last step finally integrated the information by compiling a Task * KSAO matrix as shown below. Each cell in the matrix states whether the KSAO applies to a task (Yes = Y) or not (No = N). Matrixes below show the result of 37 KSAO evaluated after taking only the 75% rated 11 final task statements.

Table 6: Task Statement by Knowledge Matrix

		K	N	O	W	L	E	D	G	E		
		K	K	K	K	K	K	K	K	K	K	K
	TS	1	2	3	4	5	6	7	8	9	10	11
T	1	Y	Y	Y	Y	Y	N	N	N	N	N	N
T	2	N	N	Y	N	Y	N	Y	N	Y	N	N
T	3	N	N	Y	N	N	Y	Y	N	Y	N	N
T	4	Y	N	Y	Y	N	N	Y	N	Y	N	N
T	5	N	N	Y	Y	N	Y	Y	N	Y	N	N
T	6	Y	N	N	N	N	N	N	N	N	N	N
T	7	Y	N	N	Y	N	N	N	N	N	Y	Y
T	8	N	N	Y	Y	N	Y	N	N	N	Y	Y
T	9	Y	Y	Y	Y	N	N	N	N	N	Y	Y
T	10	N	N	Y	Y	N	Y	Y	N	N	N	N
T	11	N	N	N	Y	N	N	N	Y	N	N	N
		5	2	8	8	2	3	5	1	4	3	3
		45	18	73	73	18	27	42	8	33	25	25
	Wt.			8	9							

As presented in Table 6 matrix shows the result of 11 Knowledge components evaluated after taking only the 75% rated 11 final task statements.

Table 7: Task Statement by Skill Matrix

				S	K	I	L	L	S	
		S	S	S	S	S	S	S	S	S
	TS	1	2	3	4	5	6	7	8	9
T	1	Y	Y	Y	Y	Y	N	N	N	N
T	2	N	N	N	Y	N	N	N	N	N
T	3	N	N	N	Y	N	N	N	N	N
T	4	Y	N	Y	N	N	N	N	N	N
T	5	N	N	Y	N	Y	Y	Y	N	N
T	6	Y	N	N	N	N	N	N	N	N
T	7	Y	N	Y	N	Y	N	N	Y	Y
T	8	N	N	Y	Y	Y	Y	N	Y	Y
T	9	Y	N	Y	Y	Y	N	N	Y	Y
T	10	N	N	Y	Y	Y	Y	N	N	N
T	11	N	N	N	N	Y	N	N	N	N
		5	1	7	6	7	3	1	3	3
		42	8	58	50	58	25	8	25	25
	Wt.			11	13	12				

As presented in Table 7 matrix shows the result of 9 Skill components evaluated after taking only the 75% rated 11 final task statements.

Table 8: Task Statement by Ability Matrix

		A	B	I	L	I	T	I	E	S			
		A	A	A	A	A	A	A	A	A	A	A	A
	TS	1	2	3	4	5	6	7	8	9	10	11	12
T	1	Y	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y
T	2	N	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y
T	3	Y	Y	Y	Y	Y	N	N	Y	Y	N	Y	Y
T	4	Y	Y	Y	N	Y	N	N	Y	Y	N	N	Y
T	5	N	Y	Y	N	Y	N	N	Y	Y	N	Y	Y
T	6	N	Y	Y	N	Y	N	N	Y	Y	N	Y	N
T	7	N	Y	Y	N	Y	Y	N	Y	Y	N	N	Y
T	8	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	Y
T	9	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y
T	10	N	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y
T	11	Y	Y	Y	N	Y	N	Y	Y	Y	N	N	Y
		4	11	11	6	11	3	5	11	10	0	6	10
		33	92	92	50	92	25	42	92	83	0	50	83
	Wt.		1	2	14	3			4	6		15	7

As presented in Table 8 matrix shows the result of 12 Ability components evaluated after taking only the 75% rated 11 final task statements.

Table 9: Task Statement by Other Attribute Matrix

		O	T	H	E	R
		O	O	O	O	O
	TS	1	2	3	4	5
T	1	Y	Y	Y	N	N
T	2	Y	Y	N	Y	Y
T	3	Y	N	N	Y	N
T	4	Y	N	Y	Y	N
T	5	Y	N	N	Y	Y
T	6	Y	N	N	N	N
T	7	Y	Y	Y	Y	N
T	8	Y	N	N	Y	N
T	9	Y	Y	Y	Y	N
T	10	Y	N	N	Y	Y
T	11	Y	N	N	N	N

	11	4	4	8	3
	92	33	33	67	25
Wt.	5			10	

As presented in Table 9 matrix shows the result of 5 Other Attribute components evaluated after taking only the 75% rated 11 final task statements.

4.3   Rationalizing the approach on why these KSAO's were chosen for the interview

The following 11 task characterizations of the KSAO's were *not* chosen for the interview portion of the SSP, as these were already evaluated by the earlier 3 tests:

The *Cognitive Ability Tests* were conducted to help tap into the candidates' *Knowledge* of the **English Language** including their *Skill* in **Verbal Communication** and*Ability* to **make Judgment**. The candidates' to further demonstrate this *knowledge* and *skill* covertly, while answering questions asked in the panel interview.

The *Work Samples and Simulations* conducted in earlier tests helped demonstrate the candidates' *Knowledge* of **Computers**, Skill in using **Microsoft Word, Excel and Outlook** and*Skill* in **Written Communication**, *Ability* to work in a **cramped Environment and Space** and *Ability* to **Multitask**

The "*5Big Five"* testdimensions helped evaluate *Ability* to Make Judgment, Interpersonal *Ability*, *Attribute* of Honesty and *Ability* to Deal with New People and Situation.

The following 4 task characterizations from the critical KSAO's were chosen for the interview, comprising mainly of *Abilities* and *Other Attributes,* due to the reasons given below:

1. Ability to work Concurrently -92%
2. Ability for Self-Management -92%
3. Attribute of Emotional Intelligence – 92%
4. Ability to Make Decisions – 83%

The above 3 *Abilities* and 1 *Attribute* have been chosen for formulating *behavior interview questions*, because of their high occurrence in task statements as denoted by the percentages. Ex: *working concurrently* is an ability that is 92% critical in the *final task inventory*. Therefore, these *abilities* and *attribute* are critical and need to be evaluated not just for a *Person-Jobfit*, but also for their contextual and *Person-Organization* fit.

4.4   The Interview tool developed uses Behavioral Description Interview technique:

A behavioral description complete with Probes and Scoring Guides was developed based on KSAO's identified. "Task statements might be generated for a job, or set of points considered when interviewing incumbents, because different situations do in fact call for different job analysis approaches" (Brannick& Levine, 2007, P.802). An Interview tool is being developed

for the same position using a Behavioral Description Interview technique based on the KSAO's identified.

Functional Job Analysis (FJA) method was used to develop the structured interview questions, as the KSAO's were derived using this method of job analysis. The FJA formed the basis for *Behavioral Description Interview* (BDI). Behavioral questions were based on information obtained from the incumbent through interview and questions used with other job incumbents while rating the task statements.

Questions and scoring guides developed were first tested on a select group of applicants to ensure questions were clear and could generate a wide range of responses. *Probes*/follow-up questions were developed for the interviewer to guide the applicant. Necessary training is to be given to interviewers on scoring of answers that don't fit examples in the scoring guide. The *Scoring Guide* useda behavior rating scale of 1, 3 and 5 with sample answers to each question, and will help interviewers evaluate and score candidate answers, with 1 being low and 5 being high. These have been based on KSAO's and performance management criteria derived from *job analysis*.

4.5   Snapshot of the Behavioral structured interview tool developed based on final KSAO's:

In the*Behavioral Structured Interview*, the candidatewill describe what he/she did in similar situations in the past. The panelwill predict candidate behavior based on their past behavior descriptions from previous work experiences in similar situations. Below is the sample interview developed along with probes and scoring guide.

<div align="center">

SAMPLE

<u>BEHAVIOR DESCRIPTION INTERVIEW QUESTIONS</u>

</div>

1. We all encounter situations when we have to *Work Concurrently*. Tell me about a time when you had to handle difficult customers/colleagues with an urgent reporting deadline to meet for your boss. How did you handle it?

   Probes: Which aspect of the job did you give first preference to?
   Did the customer/colleague go back satisfied?
   Were you able to meet the task deadline of your boss?
   What issues and consequences did you consider while responding to thecustomer/colleague?
   What was your final decision and what was the outcome?

Scoring Guide

1. I told the customer /colleague that I had an urgent deadline to meet and I had to complete that first before I could take a look at his / her issue.

1. I gave my full attention first to the urgent nature of my customer / colleague's issue and tried to resolve it, and subsequently justified to my boss the reason for the delay in submission of my report.

5. I listened to my customer/colleague's issue patiently and gauged the urgency of his matter. Perceiving the matter as being not urgent, Ihelped my colleague compose himself and gave him 3 optionsfrom my perspective, which he could consider while taking some more time to think on those. Upon ensuring that he was satisfied, I returned my attention to the urgent report at hand and without losing any further time and being organized by nature, I was able to complete my report and submit it to my boss in time. I gave priority to tasks based on their urgency and importance.

2. We all encounter situations when we have to *Self-Manage*. Tell me about a time when you were challenged to do this. How did you handle it?

Probes: What aspect of your work did you find challenging to self-manage?
        Did the situation challenge you because you did not have sufficient information?
        Did you share this situation with anyone?
        What issues and possible consequences did you consider?
        What was your final decision and what was the outcome?

Scoring Guide

1. I decided to do it my way, because nobody would notice it anyway.

3. I decided that a little lying was not wrong, as ultimately what mattered was getting the job done as quickly as I could.

5. I observed how my colleagues did the same task and sought clarification and help wherever I needed. I shared my concerns and my difficulties with my immediate supervisor and set benchmarks for my performance, based on the correct way of doing it as per the organization's policy. I handled my work on

set standards and based them on my rich past experiences, while following approved procedures.

3. We all encounter situations when we have use our *Emotional Intelligence* while dealing with people and situations. Tell me about a time when you had to handle people or situations using your emotional intelligence. How did you handle it?

  Probes: What aspect required you to use your emotional intelligence?
    In what way did your emotional intelligence help you?
    What challenges did you face and how did you handle it?
    What issues and possible consequences did you consider while dealing with the
    situation?
    What was the final outcome?

Scoring Guide

1. I usually approach any new situation or while dealing with people using my 'gut' feeling as that always works for me.

3. I approach any situation or people with a very happy and positive attitude and decide on putting my best foot and face forward and being ready for any challenge and 'diving' right into it.

5. I observe a given situation or people who I have to deal with by first listening, then understanding and finally learning about them. I don't 'throw' myself to deal with anything based on my 'gut' feeling or just using a positive attitude. I base my actions and responses to anything in an emotionally balanced way and use my interpersonal abilities and relationship management skills to draw 'issues' out of the situation or people and look at the logical step-by-step way at the 'bigger' picture with a long –term perspective in mind, prioritizing on building relationships and synergies as I move forward

4. We all encounter situations when we have to *Make Decisions* based on uncertainties. Tell me about a time when you had to make decisions based on incomplete information. How did you handle it?

  Probes: How did the uncertain situation effect your decision?
    When did you realize the information you had was insufficient and how did you go about making the decision?

Did you eek anybody's help or advice while doing this?

What issues and possible consequences did you consider for making the decision?

What was your final decision and what was the outcome?

Scoring Guide

1. I decided to make a decision anyway with whatever information I had.

3. I consulted with my colleagues and sought advice on taking the right decision in the situation, based on past precedent.

5. I considered facts of the case and arrived at a tentative solution based on current information at my end. However, I took time to understand the complete picture and did my research, before arriving fully at the final conclusion based on facts. I considered various options fully, based on the scenario and after gathering the complete information I made decisions while considering long-term impact of my decision on all stakeholders and the organization.

4.6. Limitations of using this tool

Although there is a limitation in using the Scale, of raters using other interpretations of job dimensions in giving ratings; however, at least raters have to consider the standardized definition provided. The anchors provide benchmarks to help raters understand differences between degrees of various job dimensions; however, different raters may still have a different understanding of what constitutes "average" behavior.

5. Conclusions

The identification of final 15 KSAO helped in creating the following:

- A well planned and strategically aligned behavioral structured interview tool that can help the Human Resource Department of any organization to design a well structural performance management system including performance assessment, evaluation and decision-making.
- The final 15 KSAO's identified through the process of job analysis that have been used to develop the tool. Candidates who fall short of the criteria required may be rejected.
- The extensive exercise of identifying the KSAO's based on major task assessment and then developing a behavioral interview tool aligned to that for a particular job can help managers evaluate potential employees fairly in an unbiased manner leading to effective selection decisions that has strategic value for an organization.

6.   Recommendations

6.1   The Screening of job applicants must consider Minimum Qualifications:

KSAO's identified by job analysis can help further in developing screening methods that will be shown in a subsequent paper. Sanchez and Levine (2007, pp. 53-63) even suggested the term job analysis be replaced with the more appropriate term 'work' analysis to address criticisms of the process. According to them, "knowledge and skills that can be easily taught and that are very specific to the job are knowledge and skills that should be included in training, while more stable individual characteristics such as mechanical and cognitive abilities should be the basis for screening applicants". Minimum Qualifications based on KSAO's identified by job analysis would help in Screening of job applicants' using various screening methods.

6.2   The Employment Testing method:

KSAO's can be tested and cognitive and non-cognitive testing methods can be developed giving justifications for each test.

6.3   Decisions-Making using a Multiple Hurdle Model and Top-Down Approach:

A model of decision making can be developed, which combines scoring date from all predictors for making the final decision on selecting the right candidate for a position, concluding the entire series of this research based on job analysis.

Acknowledgements

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